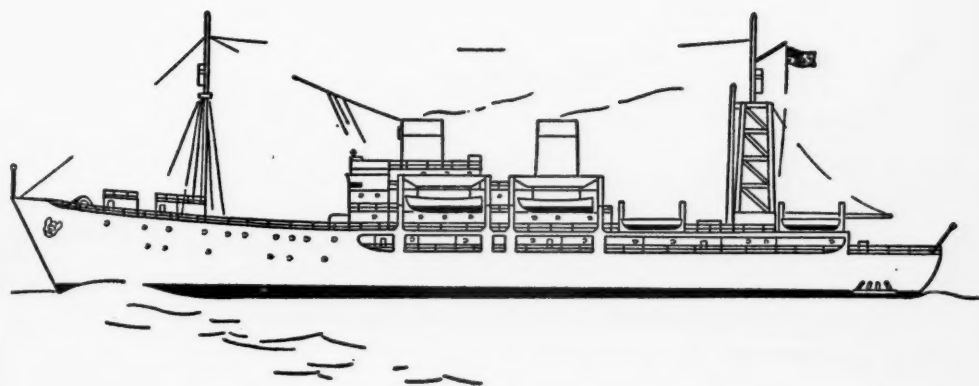


CALIFORNIA SCHOOLS



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The central figure of the cover illustration, depicting the beautiful white 7,000-ton Training Ship *GOLDEN BEAR*, is bordered by four symbols: the seal of the California Maritime Academy, the sextant and anchor, representing the basic nautical sciences of navigation and seamanship; and the propeller, representing marine engineering. The drawing is by Midshipman Dalton W. Davis, Class of 1954.

THE CALIFORNIA MARITIME ACADEMY— The West's Only Maritime College

COMMODORE RUSSELL M. IHRIG, U. S. Navy (Retired), Superintendent

There is more to commerce on the sea than ships and cargoes and profits through trade, important though these be. There is the mingling of the nations and their peoples, the learning of other cultures, languages and customs, the understanding of national strengths and weaknesses. No nation in history which neglected the sea has long remained a world power. Of the 44 cities in the world with a population of over one million, 39 are seaports. These significant facts must not be forgotten in the field of American education, with its heavy responsibility to future American leadership in a hoped-for free and understanding world.

The California Maritime Academy, one of the eleven educational institutions comprising the state college system, is located on the north shore of an historic California waterway, Carquinez Strait. The 170-acre site, about 25 miles below the confluence of two great rivers, the Sacramento and the San Joaquin, nestles in a valley opening on the upper reaches of the largest inland harbor area in the world, some 234 square miles of the navigable waters of San Francisco and San Pablo Bays.

One hundred years ago, as many as eight noisy river steamers passed this site each day on their way to and from the inland gold-field ports and San Francisco. Today, the students of the Academy, gazing from a classroom window or from the decks of their training ship or from their drill field, see the daily parade of ocean-borne commerce carried by freighters and tankers of many nations. Directly across the Strait, at the pier of one of the country's largest lead refineries, lies a freighter bringing ores 8,000 miles from New Zealand and South America. A Matson freighter passes under Carquinez Bridge to deliver raw sugar from Hawaii to one of the largest sugar refineries in the world. A giant tanker pulls in to a huge oil refinery just below. A Luckenbach freighter passes down toward the Golden Gate, laden to the Plimsoll marks with rich cargo from the great Central Valley loaded at the Port of Stockton, 60 miles up the San Joaquin channel. A smart gray and white Danish diesel-powered ship sounds one blast to pass her on the opposite course headed for Stockton. An empty Japanese whale-oil tanker follows her upstream to obtain a load of chemicals from a petrochemical refinery for the restoration of Japanese industry. Tugs pass constantly, towing heavily loaded lighters and barges. A heavy cruiser, home from Korea, rides at anchor preparatory to entering the neighboring Mare Island Naval Shipyard. Three sleek destroyers head outward in formation

from the Port Chicago Ammunition Depot, bound for Asiatic waters. A freighter from the reserve fleet of merchant ships at Suisun Bay is being towed to an Oakland shipyard to be made ready to carry its share of wheat to Pakistan.

The panoply of ships is a significant reminder to the students of the importance of the sea and ships to the state and nation as well as to themselves. Here, in surroundings realistically enlivened by the moving ships of ocean commerce, the students study and train for three years to become licensed officers of the Merchant Marine and commissioned officers of the U. S. Naval Reserve.

The stated mission of the Academy, as prescribed by the Board of Governors, is "to educate and train young men of California to become technically and morally qualified officers of the Merchant Marine and Naval Reserve, in order to serve the interests of the State and Nation on the high seas in peace and in war."

It was the understanding of the vital significance of sea-borne commerce to California that generated a movement in 1927 among prominent leaders and civic groups to promote the establishment of facilities to educate and train future officers for the merchant marine.

Here was a state whose first white visitors, nearly 400 years earlier, had come by ship, when Cabrillo sailed into San Diego Bay; whose conquest in the eighteenth century and succeeding occupation were made possible by ships that kept tight the ties of Spanish control; whose gold fields had caused a great migration and a demand for supplies that had crowded San Francisco Bay with literally hundreds of ships—more ships at one time than it has ever seen since; whose flowing "black gold" had later caused southern California harbors to develop beyond the wildest visionary dreams.

Here was a great maritime province, facing the largest ocean on the earth, with the second longest ocean coastline and more deep-water ocean ports than any other state. Industry, expanding dramatically, was forging to first place in production, ahead of agriculture. Not only the riches of the good earth of the state, but the products of man's genius, must be sold in the markets of the world. Los Angeles was exporting goods to more than 80 countries. Tourists could buy raisins from Fresno in Calcutta, lettuce from Salinas in Hongkong, apples from Sonoma County in Rio de Janeiro, shirts in Panama made from cotton grown near Bakersfield, gasoline in Alaska which was produced in Los Angeles, and sukiyaki in Yokohama made with rice grown near Woodland.

Here was a commonwealth that must have men highly competent in the seagoing profession to shoulder the heavy responsibilities of delivering the mighty flow of trade in and out of her harbors, if the severe competition of ships under foreign flags was to be met. A great maritime province should have the most highly skilled mariners, educated and

trained for the purpose. California's shipbuilding industry was turning out passenger liners, freighters, tankers. These ships would carry hundreds of passengers, millions of dollars' worth of oil and other cargo. Where would the men come from to manage and operate these ships? Larger ships, higher speeds, more powerful and complicated machinery and equipment, more valuable cargoes, higher insurance rates—all these factors dictated the demand for highly trained officers.

So reasoned the wise leaders of the movement to establish a nautical school within the educational system of California. New York had had a state nautical school since 1874, Massachusetts since 1891. Leaders in California shipping, business, and civic affairs who realized the significance of sea commerce to the state worked during 1928 to have a bill for a maritime academy introduced in the State Legislature. In the session of 1929 the bill was passed and Governor C. C. Young signed it.¹ The California State Nautical School was established.

The U. S. Navy, by a federal law of 1874, was authorized and directed to assist those states which desired to establish nautical schools. The Navy accordingly lent to the California school a coaling station at Tiburon, in Marin County, for a site, and the *S. S. Henry*, a small, low-powered, single-screw, Great Lakes freighter, for a schoolship. The *Henry* was delivered at Mare Island in August, 1930, for overhaul and conversion by the Navy for this new purpose.

Meanwhile, the Board of Governors, which by law is appointed by the Governor, had selected Lieutenant Commander Emile Topp, U. S. Navy (retired), as the first Superintendent. The first class of cadets, as they were then called, entered the school, 60 strong, in March, 1931. A second class, numbering 50, entered on December 8, 1931. On December 31, 1931, the schoolship, renamed California Training Ship *California State*, started on its first training cruise. This was a 21,000-mile trip around South America through the Straits of Magellan and up the Atlantic Coast to Washington and New York, and back to San Francisco Bay by way of the Panama Canal, in May, 1932. The first entering class graduated 44 of its 60 entrants in August, 1933. Captain Ralph M. G. Swany, U. S. Naval Reserve, a master mariner, who is commanding officer of the present schoolship and head of the academy's Department of Navigation and Seamanship, was a member of that class.

The California Training Ship *California State* continued thereafter to make annual cruises to various foreign and American ports. The 1933 cruise, lasting six months, circumnavigated the globe westward. The 1937 cruise took the cadets to Australia and New Zealand. Intervening years saw the *California State* in the Caribbean, on the west coast of South America, and again on the east coast of the United States. On all these cruises, the cadets were not passengers but were the actual crew

¹ Chapter 661, Statutes of 1929.

of the vessel; and the school instructors, who were practical licensed mariners, were the ship's officers. World War II caused the vessel's training cruises to be restricted to the confines of San Francisco Bay, San Pablo Bay, and the San Joaquin River from its mouth to Stockton.

During the first ten years of operation, the school added academic instruction in nautical sciences and marine engineering to provide a theoretical background to the practical training, and cadets attended classes for approximately eight months of each year. The California State Nautical School became more than a practical training school. Shipping companies appreciated the good training and technical education of the young graduates whom they eagerly hired as officers for their ships. In 1939, upon recommendation of the Board of Governors, the Legislature amended the State Nautical School Act to permit a change of the name of the school to The California Maritime Academy, its present title.¹

After getting the school off to a most creditable start, Captain Topp resigned in 1934, and Richard C. Dwyer, formerly chief engineer of the giant liner *Leviathan*, who had been Chief Engineer of the schoolship, acted as superintendent until the appointment of Captain Neil Nichols, U. S. Navy (retired), on July 1, 1937. Richard C. Dwyer, reverting to his former post, eventually became Dean of Instruction and remained in that post until his retirement in February, 1951, after 21 years of valued service. Captain Nichols retired as superintendent on June 30, 1940, and Captain Claude B. Mayo, U. S. Navy (retired), was appointed superintendent.

In 1940 the school was forced to vacate its premises at Tiburon, which were needed by the Navy for expansion of its own facilities. For the next three years classes were conducted largely on board the schoolship *California State*.

The development of the academic three-year curriculum progressed by 1939 to the point where the Board of Governors, under authority granted by the Legislature,² were able to confer the Bachelor of Science degree upon the graduates of June 16, 1939. The California Maritime Academy was the first maritime school in the United States to grant the degree and the first to require three years of study in qualification for the Merchant Marine officer's license. During the subsequent war years, the granting of the degree was suspended because of the necessity for shortening the course to 18 months in order to meet the urgent war demand for more trained Merchant Marine officers. In response to this same demand, the State of Maine established the Maine Maritime Academy in 1941, and the Federal government entered the training program by establishing the U. S. Merchant Marine Academy at Kings Point, Long Island, in 1942.

¹ See Education Code Section 21153.

² Chapter 991, Statutes of 1939. See Education Code Section 21161.

Because of the necessity to move the schoolship from one berth to another as the war affected conditions in San Francisco Bay, and the realization that academic classes could not continue to be conducted effectively on board the crowded schoolship, the Board of Governors began in 1940 to inspect sites for a permanent location for the school. Some 40 different locations were inspected throughout the State, and the various seaports put in strong bids to get the school. The site selected, because of the deep water at the shore line for a pier for the school ship, as well as readily available acreage, was at Morrow Cove on Carquinez Strait, just outside the city limits of Vallejo. The project received approval and negotiations were completed to acquire the 70-acre site. The legislature passed an appropriation in 1941 for the construction of necessary buildings. However, the funds made available at that time were only sufficient to construct a pier for the schoolship, a modern gymnasium and natatorium, a seamanship building and boat shed, and five cottages for administrative officers who would be required by their duties to live at the new base. General site development was also undertaken, such as grading for the remainder of the permanent buildings. Meanwhile, temporary frame buildings were constructed for administration, classrooms, mess hall, and barracks. On August 24, 1943, the school moved to its present permanent site and the Academy as it exists today as an academic institution began to function. The name of California Training Ship *California State* was changed to Training Ship *Golden Bear* at the request of the Federal Maritime Administration.

At the conclusion of World War II, the full three-year course was resumed and degrees were again conferred upon graduates of the full course. Training cruises to foreign ports were again undertaken in 1946 and 1947.

An inevitable lack of balance in the curriculum developed during the war years as a result of the emphasis upon a program of urgently needed practical training which could be completed in 18 months at the expense of theoretical instruction. A concentrated attack was made to correct this condition. A committee selected to make a survey of the institution was headed by Dean A. John Bartky of the School of Education at Stanford University. The report of the survey, submitted to the Board of Governors early in 1927,¹ gave due consideration to the difficulties under which the Academy had operated during the war years, frankly outlined the existing conditions with regard to academic instruction and training, and made definite recommendations for long-term improvement. The continuation of military control and routine, as distinguished from normal college civilian control, was recommended, together with strengthening of discipline. The survey committee strongly recommended the continuation of the school and justified the conception of

¹ "A Survey of The California Maritime Academy," supervised and conducted by the Stanford University School of Education (A. John Bartky, Chairman), 1947. Pp. ii+78 (mimeographed).

integrated theoretical and practical training through intensive classroom instruction combined with training cruises. It is interesting to note that in other state colleges the pattern of integration in certain fields of education appears to resemble that of the Academy. Business and industry are insisting upon more specific technical qualification on the part of college graduates accepted for supervisory positions. The Bachelor of Science degree is becoming an increasingly frequent prerequisite to employment in industry. The orthodox educator, formerly bound by tradition to emphasize the liberal arts, is giving recognition to the position that one of education's first obligations is to prepare students to earn a living in the highly technical and competitive world of today.

In 1947, Captain Claude B. Mayo retired as Superintendent of the Academy and the Board of Governors selected Commodore Russell M. Ihrig, U. S. Navy (retired), as his successor. Commodore Ihrig assumed his duties on November 1, 1947. The Board of Governors gave the new Superintendent the 1947 survey report as his guiding document for the improvement and long-range development of the Academy.

Certain necessary reorganizations of personnel and methods were instituted. The policy was established that Academy procedures would parallel state college procedures wherever possible, subject to modifications that would be necessary because of the highly specialized nature of the curriculum and objective of the Academy and the dual nature of its function as a state educational institution under partial federal supervision by the U. S. Maritime Administration and the U. S. Navy Department. The Superintendent of the Academy participated in regular meetings of the Council of State College Presidents. Careful comparative studies of per capita costs were undertaken. The curriculum was thoroughly overhauled. A general catalog providing specific and detailed information on the curriculum and admission requirements was published. To improve faculty morale and standards, position classifications and pay scales for faculty and other staff members were brought more nearly into conformity with the state college standards. While student discipline was tightened, as recommended by the survey report, more liberal privileges were instituted, paralleling the customs on other college campuses. Strict standards were introduced in regard to academic standing, intramural athletics, practical work, leadership, and other aspects of Academy life. The minimum qualifying grade on the aptitude test for admission was raised. An Academic Board was established to pass upon cases of students who were failing or whose work was unsatisfactory. Weekly faculty meetings were established. Shipping officials, who would receive the graduate product, were invited and encouraged to visit the Academy and the training ship. Articles about the program and the work of the Academy were published in maritime journals. Members of the senior class were encouraged and

assisted in competing for national honors awarded by the Propeller Club of the United States.¹

The natural let-down after World War II in public interest in service on the high seas had caused the Academy enrollment to drop. This had resulted in some weakening of the academic and disciplinary standards for retention of students. It was now agreed that the future of the Academy must inevitably rest on the quality of its graduates, rather than upon the number. Obviously, since the cost per student per year to the taxpayers would inevitably be higher in the Academy than in other state colleges, due to the limitation of enrollment to approximately 200 students, this higher cost should be justified by the high calibre of the Academy product. It was also apparent that although the average American youth was not interested in a maritime career, the number who were interested was adequate to justify high standards of selection of candidates and for retention and graduation.

The survey pointed out that "it should be the obligation of the Academy to do all in its power to raise the standards set for maritime officers," and that "graduates of the Academy must set the standards of all United States Merchant Marine Officers." The moral adjurement of the mission of the Academy—to train graduates "to become . . . morally qualified officers . . ." received increased attention. The newly established Academic Board not only dropped students who failed in their school subjects, but also made recommendations to the Board of Governors that students who failed morally or in general conduct and performance should be dismissed or dropped for inaptitude.

Predictions were made by some observers that the Academy enrollment could not be increased under such high requirements. When the training ship made its cruise to France, Italy, and Greece in 1948 with food supplies for relief of destitute children, there were only 88 students to man the ship. However, four years later, in 1952, the enrollment under the more rigorous requirements had increased to 198, and those enrolled were only the top third or half of the number who had sought admission during that period. This was a demonstration of the soundness of the premise that the way to strengthen a team or an organization is to make it hard to join and hard to stay in, and also that it is characteristic of fine American youth to want to belong to a top outfit, even though it be small in size.

In the discussion of such a highly specialized institution, it is pertinent to point out some of the factors that govern the size of the school. To provide the number of officers required to man the ships of the American Merchant Marine in normal peacetime, and to replace those who leave the service, the Federal Maritime Administration, which is

¹ The Propeller Club of the United States, a national organization for the promotion of public knowledge of the American Merchant Marine, has granted annually the Pi Sigma Phi award to encourage scholastic achievement in shipping and transportation.

responsible for the over-all planning of training, has established the policy that, roughly, 60 per cent of the officers should be permitted to qualify from the ranks. The remaining 40 per cent are to be graduates of the state maritime academies of California, Maine, Massachusetts, and New York, and the federal academy at King's Point, New York. This plan provides an enrollment quota of approximately 200 students for the California Maritime Academy, and the facilities of the school are established accordingly. Entering classes each year are expected to number from 70 to 85 students, and the normal reduction within classes during the succeeding years to keep the total enrollment within the quota of 200.

Another factor favoring selective enrollment is the attitude of the American youth seeking education beyond the high school. The average college entrant is usually acquainted with the prospects offered him in the standard professions or in business. He is well aware of the advantages of a normal community life, with participation in civic and social activities. He desires to have a home and to be at home with his family. He knows that if he tries as hard as the average, the economic structure of the country will permit him to make a good living, without serious hazards or hardships. He is satisfied to be a provincial American.

But there is, fortunately for the history of the world and particularly for this nation, a small percentage of bold and ambitious young men who desire to see beyond their immediate horizons, who believe that there are bigger opportunities in the world at large than at home, who wish to see and know the world and its various peoples. They like adventure and are willing to face hazards and hardships. They rise to the severe challenge of the sea and they are willing, at least for a portion of their lives, to live upon its ships and partake of the rich profits of its travel as well as its trade. They may not admit it—in fact, many of them would deny it—but they enjoy the romance of the sea and thrill secretly to its physical and psychological challenges. They are of the breed that has made intercontinental and international history as the explorers, the first ambassadors, the first foreign teachers, as well as the first foreign students, the first foreign salesmen. In these and similar capacities they are today expanding the intercontinental, international, and interracial borders of the modern world.

It is largely from this special type of young American, limited in number, that the Academy must expect to draw its student body. Candidates have come from big cities and from small towns, from farms, from backwoods, and from all economic levels from rich to poor, and from many racial antecedents. The early adventurous spirit of man flourishes in all parts of our country and citizenry.

What studies does such a student, who desires to follow the sea, pursue? The Academy curriculum offers, in effect, two major programs—the course for Deck Officers and course for Engineer Officers.

Officers of the Merchant Marine serve on board ship under license as one or the other of these, but not both. Deck officers are the master and mates who navigate and maneuver the ship, who secure it at piers or at anchor, who supervise loading, stowage, and unloading of cargo, who are responsible for safety of life at sea, for the observance of international rules of the road and of national and port regulations, for maintenance of hull cargo spaces, topsides, and the like. Engineer officers are primarily responsible for the operation of main propulsion and auxiliary engineering plants of the ship and for maintenance of the spaces which these occupy. Their duties require knowledge of the operation of marine steam, diesel, and electrical machinery, of lighting, ventilation, sanitation, heating, and refrigeration systems, and all the multitude of other aspects of engineering in a modern ship.

Within two weeks after admission to the Academy, the entering student elects to take either the deck or the engineering course. The competitive aptitude examination of applicants for admission gives information on the basis of which the faculty can aid the entering student to make a reasonable choice. After the choice is made, transfer between the two courses is not permitted. The subject matter covered in the two major courses diverges so rapidly, almost from the beginning, and becomes so intensive that most students, if allowed to transfer, would be unable to make up within the time allowed the content that would have been missed.

The two courses are about equal in the extent and difficulty of the subject matter covered. In general, the deck officers' duties are more nearly executive in nature than those of the engineers. In his daily duties the deck officer will be required to make decisions regarding maneuvering, loading, and personnel administration, some of which can be highly critical for the interest of the ship and its owners, the passengers, or the shippers. The road to the position of master of a ship is by promotion from among the deck officers, known as mates. Environmentally they are "topside" men, and spend most of their time on the bridge of the ship and on deck.

The engineer's duties are extremely important, because the safe and efficient operation of the ship on its runs depends heavily upon their technical qualifications to maintain the complicated propulsion and auxiliary machinery which provides all the power needed for every purpose, including utilities for living on board. A merchant vessel must maintain its operating schedule if it is to make money for its owners. Engineering officers of merchant vessels have excellent qualifications and experience for operating major stationary power plants ashore, either in public utilities or industrial plants. Deck and engineering officers have approximately equal opportunities for eventual transfer to shore in administrative positions of the various port offices.

The comprehensive and thorough instruction at the Academy covers in three years all aspects of the technical and professional knowledge required in qualifying for a Merchant Marine officer's license under professional examinations conducted by the U. S. Coast Guard. Education Code Section 21126(c) gives the Board of Governors the authority to "fix the terms upon which students shall be received and instructed in the school, and suspended, discharged, or graduated therefrom." Under this authority, the Board has specified that the primary mission of the Academy is to train young men to become technically and morally qualified officers of the Merchant Marine. The last of the final examinations prior to graduation are, therefore, the federal license examinations by the U. S. Coast Guard. In preparation for these examinations, the graduating senior must pass the final examinations of the Academy near the close of his third year. No prospective graduate has ever failed to pass the license examinations, and the averages achieved have been high.

The highly specific mission of the Academy obviously implies that the entering student has the maritime profession as his definite objective. The entire course, both academic and practical, is scheduled to prepare him for this objective. Contrary to the usual college practice, there are no elective subjects. The broad range of specific skills and knowledge required of the efficient merchant marine officer makes it necessary for the major portion of the academic work to be devoted to professional subjects. General subjects such as English, mathematics, physics, chemistry, economic history, and mechanical drawing, are all scheduled and designed to contribute to preparation for the professional subjects. Under authority of Education Code Section 21161, the Board of Governors confers upon the graduates the Bachelor of Science degree, attained by successful completion of 142 units of college level technical instruction and three annual training cruises, each of approximately three months duration.

The very nature of the duties of merchant marine officers makes it necessary to include practical instruction throughout the three-year course. Practical instruction and athletics are scheduled in the afternoon, academic classes in the morning. In the practical periods the students are occupied in boat drills, navigation and seamanship practices, machinery and equipment overhaul, machine shop and foundry practice, ship maintenance and repair. In the exercise and development of supervisory skills and leadership, upper classmen are assigned to take charge of drill and work groups. Close integration of the theoretical and the practical is facilitated by this daily scheduling of both academic classes and practical work. The integration is further facilitated by the fact that each of the instructors, all of whom are licensed professional mariners, conducts the concurrent dual phases of the instruction in his subjects. This type of vocational-professional instruction at the college level is steadily receiving more favorable attention and approval.

The merit of the program of integrating theory and practice at the Academy is fully demonstrated during the annual training cruises. After the ten-day Christmas vacation, which follows the first academic semester, the entire student body, known as the Corps of Midshipmen, embarks on the Training Ship *Golden Bear*. The instructors, assuming the other role of their dual status, become the ship's officers. They are qualified for these posts not only by their licenses but by their commissions as naval reserve officers. The provisions and technical stores for the cruise are loaded. Steam is gotten up in the main boilers of the 6,000 horse-power plant. All machinery is tested. The students are the crew and perform all duties, either deck or engineering, according to their respective major courses. The ship proceeds to a San Francisco Bay area shipyard and is drydocked. Any major repairs or alterations are completed. Inspections of hull, machinery, equipment, and boats are conducted by U. S. Coast Guard, which has jurisdiction over the safety of merchant ships and personnel under the American flag. Notebook assignments for the cruise, involving much "sketch and describe," tracing of piping and wiring, and operation of equipment, begin to receive attention. Special classrooms and study rooms on board take on an air of studious quiet, enforced both by necessity and regulation. Life on board the schoolship, with its orderly routine, takes its traditional pattern—watches on deck and in the engine-room, special drills and instruction, work of all kinds to keep the ship seaworthy and shipshape.

On a given day, and after many preliminary arrangements, the *Golden Bear* steams proudly out the Golden Gate, to return two months later after visiting several foreign ports in South and Central America and Mexico, and four or five principal coastal ports in California. On such a cruise, the *Golden Bear* will have steamed approximately 11,000 miles. The midshipmen will have experienced the weather conditions at sea on the normal trade routes of foreign commerce. They will have observed the geography and harbor conditions of the ports which they will visit later as officers on ships. They will have met the people in those foreign ports, and will have had an opportunity to learn new customs and hear new languages. They will have had an opportunity to judge general economic and social standards and to evaluate more clearly the relatively high standards of American life. Such experience and observation must inevitably induce appreciation of the tremendous advantages of their birthright and citizenship. Thus, while actually engaged in learning and practicing the very practical seagoing arts, the Academy student is getting valuable field trips in the realms of economics, political and social philosophy, and foreign culture. These are the considerable assets of education through travel.

The educational program of the Academy has a valuable aspect in another sense. Insofar as the life of nations or of individuals is concerned, history records only two primal conditions, peace and war.

Unfortunately, history records almost as much war as peace. And while it is hoped that human progress can eventually achieve the blessed stability of peace, international affairs at this time indicate that probably for some generations to come no one should be too sure of peace. The youth, therefore, who prepares himself for the best possible role, both in terms of his own good and that of the nation, is wise indeed. To become an officer in the Merchant Marine he has elected a field of peace-time activity as broad in its horizons as the very earth itself, an industry which is vital to the economic structure of the nation. Concurrently, he is preparing himself to serve his nation in time of war in the preferred status of an officer of the Navy if the national interests so require.

SURVEY OF TEACHERS' WORK WEEK IN CALIFORNIA HIGH SCHOOLS

Prepared in the BUREAU OF EDUCATION RESEARCH by Henry W. Magnuson, Chief; Thomas A. Shellhammer, Consultant; and Peter J. Tashnovian, Consultant

Data for a survey of class size and teachers' work loads in California high schools, which was conducted under the joint sponsorship of the California State Department of Education and the California Teachers Association, were obtained as of April 21, 1950, and were compiled and analyzed by the Bureau of Education Research of the State Department of Education.¹

Surveys of class size and teachers' work loads in California elementary schools and junior colleges were conducted at the same time. A report of the junior college survey was published in April, 1953.²

SCOPE OF THE SURVEY

The survey reported here included 12,758 full-time instructors employed in the public high schools of California. All of the 58 counties in the state and 288 of the 312 day high schools which were in operation at the time of the survey were represented. Each of the instructors included in the survey completed a questionnaire from which information was obtained about the number of hours spent in a typical week of teaching and other school duties and related activities, both assigned and unassigned. The information was arranged under three general headings: (1) "instructional time," which included time spent in classroom teaching; (2) "noninstructional assigned time," which included regularly assigned hours spent in supervision of study hall, home room, and library, in preparation period, in counseling, in supervision of student activities, and in curricular and administrative duties; and (3) "other noninstructional duties," which included time spent in planning and preparing the day's work, clerical work, conferences with staff members, conferences with students or parents outside the regular school day, in-service education such as workshops and faculty meetings, extra-curricular activities such as advising student clubs, supervision of yards and hallways, and school-community service such as co-operation with parent-teacher associations.

Only full-time instructors were included in this study. Questionnaires from senior high school instructors and four-year high school instructors were grouped together, while those from junior high school in-

¹ Data in more detail than presented in this article are available in tabular form and may be obtained from the Bureau of Education Research, State Department of Education, Sacramento 14, California.

² "Survey of Class Size and Teachers' Work Week in California Junior Colleges," *California Schools*, XXIV (April, 1953), 115-31.

structors and junior-senior high school instructors were treated separately. Information supplied by the instructors in each of these three groups was further segregated according to the size of the high school district maintaining the schools in which they were employed, as indicated by average daily attendance in 1949-50 credited to the district for apportionment purposes, namely: (1) small districts—1 to 300 a.d.a.; (2) medium-size districts—301 to 1,000 a.d.a.; and (3) large districts—1,001 a.d.a. or more.

The central tendency in the frequency distributions prepared from the data obtained in this survey is here represented in each case by the mid-point, or median. Wherever the word "average" had been used in this report, whether as noun, adjective, or verb, it refers to the median.

FINDINGS OF THE SURVEY

I. LENGTH OF WORK WEEK

Table 1 presents the data obtained concerning the length of work week of full-time high school instructors, summarized by type of school

TABLE 1
MEDIAN LENGTH OF WORK WEEK OF FULL-TIME HIGH SCHOOL INSTRUCTORS, BY TYPE OF SCHOOL AND SEX OF INSTRUCTORS, WITH Q_1 , Q_3 , AND Q OF DISTRIBUTION

Type of high schools	Number of instructors	Q_1	Median	Q_3	Q
		Hrs.Mins.	Hrs.Mins.	Hrs. Mins.	Hrs.Mins.
Junior high schools	Male..... 1,470	37 : 14	41 : 13	46 : 01	4 : 24
	Female..... 2,016	38 : 25	42 : 42	47 : 30	4 : 33
	Total..... 3,486	37 : 51	42 : 07	46 : 57	4 : 33
Senior and four-year high schools	Male..... 4,493	38 : 26	43 : 27	49 : 02	5 : 18
	Female..... 3,892	40 : 04	44 : 53	50 : 52	5 : 24
	Total..... 8,385	39 : 10	44 : 07	49 : 51	5 : 21
Junior-Senior high schools	Male..... 454	38 : 14	43 : 08	49 : 25	5 : 36
	Female..... 433	39 : 35	44 : 15	51 : 03	5 : 54
	Total..... 887	38 : 57	43 : 38	49 : 55	5 : 28
All high schools	Male..... 6,417	38 : 08	42 : 55	48 : 22	5 : 07
	Female..... 6,341	39 : 31	44 : 09	49 : 49	5 : 09
	Total.....12,758	38 : 47	43 : 33	49 : 04	5 : 09

organization and by sex of instructor. The median length of work week of the 12,758 instructors included in this study was 43 hours and 33 minutes. The median for 6,417 men was 42 hours and 55 minutes per week; the median for 6,341 women was 44 hours and 9 minutes. This indicated that the typical woman teacher worked approximately one hour longer per week than typical man. Approximately the same variation was observed among the replies received from teachers in each of the three types of schools.

The median length of work week of 3,486 junior high school instructors was 42 hours and 7 minutes; of 8,385 senior and four-year high school instructors, 44 hours and 7 minutes; of 887 junior-senior high school instructors, 43 hours and 38 minutes.

Figure 1 shows the proportion of the median work week spent by instructors in the three types of schools in classroom instruction, in other assignments at scheduled hours, and in other duties performed out of school hours.

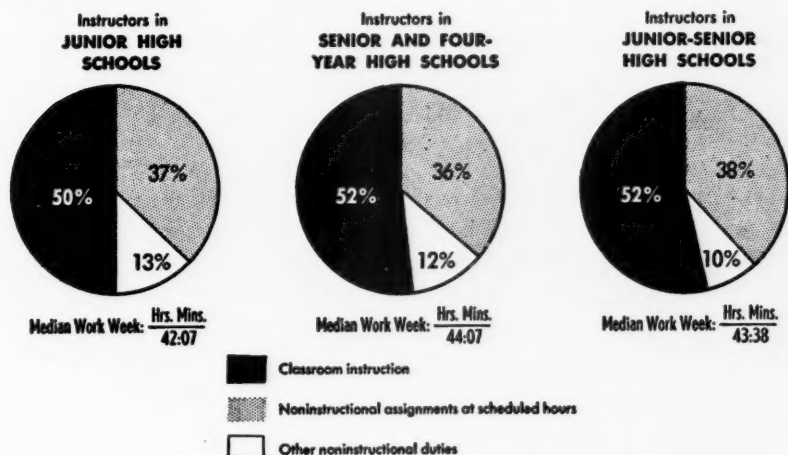


FIG. 1. TEACHERS MEDIAN WORK WEEK

Length of Work Week by Size of High School District

The median length of work week for 43 junior high school instructors in small districts was 41 hours and 25 minutes; for 60 instructors in medium-size districts, 42 hours and 20 minutes; for 3,383 instructors in large districts, 42 hours and 7 minutes.

The median length of work week for 797 instructors employed in senior and four-year high schools in small districts was 45 hours and 45 minutes; for 1,975 instructors in medium-size districts, 43 hours and 44 minutes; and for 5,613 instructors in large districts, 44 hours and 3 minutes.

The median length of work week for 57 instructors in junior-senior high schools in small districts was 47 hours and 55 minutes; for 304 instructors in medium-size districts, 44 hours and 8 minutes; and for 526 instructors in large districts, 42 hours and 58 minutes.

The typical work week in junior high schools seems to have been slightly shorter than in the other two types of schools. Its length did not vary greatly in relation to the size of the district. In senior and four-year high schools and in the junior-senior high schools, however, the teachers in small school districts worked on the average from 1 hour and 42 minutes to 4 hours and 57 minutes longer than those in large districts.

Length of Work Week by Type of Teaching Assignment

Tables 2, 3, and 4 present the lengths of work weeks of the full-time instructors who taught in one subject field only ("single-subject instructors") in junior high schools, in senior and four-year high schools, and in junior-senior high schools, respectively. Similar data are included under each of these three types of schools for the group of instructors who taught in two or more subject fields ("multi-subject instructors"). The data reported by instructors in single subject fields were arranged under eleven subject-field headings: art, commercial, language arts, foreign languages, mathematics, music, physical education and health, science, social studies, vocational, and "basic." Where the number of teachers in single fields was insufficient to permit computation of meaningful averages, such as in the junior high schools in small and medium-size school districts (Table 2) and in junior-senior high schools in small districts (Table 4), the group totals only are shown.

From the data presented in these tables, it may be observed that instructors who taught in more than one subject field worked a slightly longer week on the average than those who taught in one field only.

In the junior high schools (Table 2), the median for 19 single-subject instructors in small school district was 37 hours and 45 minutes per week; for 24 multi-subject instructors in the same type of school and district the median was 5 hours and 50 minutes longer. In medium-size districts, the median work week for 21 single-subject instructors was 39 hours and 58 minutes, while 39 multi-subject instructors worked four hours longer per week. In the larger districts, the median for single-subject instructors ranged from 39 hours and 17 minutes for 444 vocational instructors to 44 hours and 12 minutes for 254 language arts instructors, with a median of 41 hours and 29 minutes for the entire group of 2,131; the median work week for 1,252 multi-subject instructors was 97 minutes longer.

In the senior and four-year high schools (Table 3), the work week of the typical single-subject instructor in small school districts ranged from 36 hours and 35 minutes in music (24 instructors) to 48 hours and

35 minutes in language arts (46 instructors), the median for the total of 284 single-subject instructors being 45 hours and 30 minutes; the median work week for 513 multi-subject instructors in these schools was 18 minutes longer. In medium-size districts, the typical work week for

TABLE 2

MEDIAN LENGTH OF WORK WEEK OF FULL TIME JUNIOR HIGH SCHOOL INSTRUCTORS TEACHING IN ONLY ONE SUBJECT FIELD AND OF THOSE TEACHING IN MORE THAN ONE SUBJECT FIELD, BY SIZE OF SCHOOL DISTRICT, WITH Q_1 , Q_3 , AND Q OF DISTRIBUTION

Subject fields	Number of instruc- tors	Q ₁	Median	Q ₃	Q
		Hrs.Mins.	Hrs.Mins.	Hrs.Mins.	Hrs.Mins.
IN HIGH SCHOOL DISTRICTS OF 1 TO 300 A.D.A.					
Total single-subject instructors..	19	34 : 48	37 : 45	44 : 53	5 : 03
Total multi-subject instructors..	24	38 : 15	42 : 35	50 : 30	6 : 08
IN HIGH SCHOOL DISTRICTS OF 301 TO 1,000 A.D.A.					
Total single-subject instructors..	21	37 : 23	39 : 58	42 : 18	2 : 28
Total multi-subject instructors..	39	39 : 59	43 : 58	49 : 03	4 : 32
IN HIGH SCHOOL DISTRICTS WITH 1,001 A.D.A. OR MORE					
Instructors in single-subject fields:					
Art.....	124	37 : 24	41 : 40	46 : 50	4 : 43
Commercial.....	52	38 : 25	41 : 15	43 : 50	2 : 43
Language Arts.....	254	39 : 25	44 : 12	50 : 25	5 : 30
Foreign Languages.....	31	41 : 08	44 : 05	48 : 13	3 : 33
Mathematics.....	337	38 : 17	42 : 01	46 : 54	4 : 19
Music.....	138	36 : 05	41 : 00	45 : 03	4 : 29
Physical Education and Health	335	36 : 58	41 : 06	46 : 03	4 : 33
Science.....	163	37 : 59	41 : 22	45 : 56	3 : 59
Social Studies.....	192	39 : 13	42 : 50	47 : 40	4 : 14
Vocational.....	444	35 : 08	39 : 17	43 : 23	4 : 08
Basic Course.....	61	39 : 33	42 : 26	48 : 24	4 : 26
Total single-subject instructors..	2131	37 : 26	41 : 29	46 : 15	4 : 25
Total multi-subject instructors..	1252	38 : 43	43 : 06	48 : 03	4 : 40

single-subject instructors ranged from 39 hours and 45 minutes in music (73 instructors) to 45 hours and 35 minutes in social studies (124 instructors), with a median of 43 hours and 31 minutes for the group of

TABLE 3

MEDIAN LENGTH OF WORK WEEK OF FULL-TIME SENIOR AND FOUR-YEAR HIGH SCHOOL INSTRUCTORS TEACHING IN ONLY ONE SUBJECT FIELD AND OF THOSE TEACHING IN MORE THAN ONE SUBJECT FIELD, BY SIZE OF SCHOOL DISTRICT, WITH Q_1 , Q_3 , AND Q OF DISTRIBUTION

Subject fields	Number of instructors	Q_1	Median	Q_3	Q
		Hrs.Mins.	Hrs.Mins.	Hrs.Mins.	Hrs.Mins.

IN HIGH SCHOOL DISTRICTS OF 1 TO 300 A.D.A.					
Instructors in single-subject fields:					
Art.....	3	-----	-----	-----	-----
Commercial.....	46	40 : 15	46 : 30	54 : 05	6 : 55
Language Arts.....	46	43 : 35	48 : 35	52 : 55	4 : 40
Foreign Languages.....	4	-----	-----	-----	-----
Mathematics.....	12	39 : 25	43 : 00	51 : 10	5 : 53
Music.....	24	32 : 30	36 : 35	44 : 30	6 : 00
Physical Education and Health	19	34 : 38	44 : 35	53 : 43	9 : 33
Science.....	12	41 : 45	43 : 30	52 : 50	5 : 33
Social Studies.....	17	40 : 16	48 : 25	51 : 48	5 : 46
Vocational.....	100	39 : 20	44 : 35	51 : 15	5 : 58
Basic Course.....	1	-----	-----	-----	-----
Total single-subject instructors..	284	39 : 25	45 : 30	51 : 50	6 : 13
Total multi-subject instructors..	513	41 : 16	45 : 48	50 : 48	4 : 46

IN HIGH SCHOOL DISTRICTS OF 301 TO 1,000 A.D.A.					
Instructors in single-subject fields:					
Art.....	50	36 : 15	40 : 20	45 : 05	4 : 25
Commercial.....	137	39 : 01	44 : 15	49 : 28	5 : 14
Language Arts.....	192	40 : 15	45 : 23	52 : 20	6 : 03
Foreign Languages.....	59	40 : 14	44 : 15	51 : 43	5 : 45
Mathematics.....	87	38 : 28	42 : 38	47 : 23	4 : 28
Music.....	73	35 : 03	39 : 45	44 : 58	4 : 58
Physical Education and Health	176	39 : 30	43 : 50	49 : 25	4 : 58
Science.....	93	38 : 01	42 : 59	47 : 39	4 : 49
Social Studies.....	124	40 : 15	45 : 35	50 : 20	5 : 03
Vocational.....	309	37 : 58	42 : 43	49 : 19	5 : 41
Basic Course.....	11	39 : 18	44 : 45	52 : 23	6 : 33
Total single-subject instructors..	1,311	38 : 52	43 : 31	49 : 14	5 : 11
Total multi-subject instructors..	664	39 : 20	44 : 12	50 : 06	5 : 23

TABLE 3—Continued

Subject fields	Number of instruc- tors	Q ₁	Median	Q ₃	Q
		Hrs.Mins.	Hrs.Mins.	Hrs.Mins.	Hrs.Mins.
IN HIGH SCHOOL DISTRICTS WITH 1,001 A.D.A. OR MORE					
Instructors in single-subject fields:					
Art.....	193	37 : 33	42 : 38	47 : 24	4 : 56
Commercial.....	440	40 : 18	44 : 30	50 : 20	5 : 01
Language Arts.....	782	41 : 32	46 : 27	52 : 07	5 : 18
Foreign Languages.....	254	39 : 18	43 : 57	47 : 59	4 : 21
Mathematics.....	338	38 : 31	42 : 32	46 : 32	4 : 01
Music.....	173	35 : 43	41 : 05	48 : 09	6 : 13
Physical Education and Health	653	38 : 39	43 : 34	49 : 34	5 : 28
Science.....	386	39 : 55	44 : 18	49 : 06	4 : 36
Social Studies.....	548	40 : 09	45 : 06	51 : 00	5 : 26
Vocational.....	776	36 : 19	41 : 20	46 : 53	5 : 17
Basic Course.....	52	40 : 10	46 : 25	51 : 45	5 : 48
Total single-subject instructors..	4,595	38 : 59	43 : 47	49 : 26	5 : 14
Total multi-subject instructors..	1,018	40 : 00	45 : 15	50 : 59	5 : 30

1,311 individuals; the typical work week of 664 multi-subject instructors in these districts was 41 minutes longer. In the large districts the typical work week for single-subject instructors ranged from 41 hours and 5 minutes for 173 music instructors to 46 hours and 27 minutes for 782 language instructors, with a median of 43 hours and 47 minutes for the group of 4,595 instructors; the typical week for 1,018 multi-subject instructors in these districts was 88 minutes longer.

In the junior-senior high schools (Table 4), the median work week in small districts for 22 instructors in single-subject fields was 44 hours and 20 minutes, while 35 multi-subject instructors worked 5 hours and 15 minutes longer. In medium-size districts the work week for single-subject instructors ranged from 36 hours and 45 minutes in music (7 instructors) to 47 hours and 35 minutes in language arts (10 instructors), the median for the group of 138 instructors being 43 hours per week; the typical work week for 166 multi-subject instructors in these districts was 2 hours and 10 minutes longer. In the large districts the medians for single-subject instructors ranged from 41 hours and 40 minutes in art (16 instructors) to 48 hours and 35 minutes in vocational subjects (71 instructors), the median week for the entire group of 403 instructors being 42 hours and 49 minutes; the median for 123 multi-subject instructors in large districts was 64 minutes longer.

TABLE 4

MEDIAN LENGTH OF WORK WEEK OF FULL-TIME JUNIOR-SENIOR HIGH SCHOOL INSTRUCTORS TEACHING IN ONLY ONE SUBJECT FIELD AND OF THOSE TEACHING IN MORE THAN ONE SUBJECT FIELD, BY SIZE OF SCHOOL DISTRICT, WITH Q_1 , Q_3 , AND Q OF DISTRIBUTION

Subject fields	Number of instruc- tors	Q ₁	Median	Q ₃	Q
		Hrs.Mins.	Hrs.Mins.	Hrs.Mins.	Hrs.Mins.
IN HIGH SCHOOL DISTRICTS OF 1 TO 300 A.D.A.					
Total single-subject instructors..	22	42 : 45	44 : 20	49 : 05	3 : 10
Total multi-subject instructors..	35	44 : 48	49 : 35	59 : 23	7 : 18
IN HIGH SCHOOL DISTRICTS OF 301 TO 1,000 A.D.A.					
Instructors in single-subject fields:					
Art.....	8	38 : 50	42 : 45	47 : 30	4 : 20
Commercial.....	15	37 : 18	44 : 35	54 : 21	8 : 32
Language Arts.....	24	39 : 45	45 : 35	52 : 30	6 : 23
Foreign Languages.....	4	-----	-----	-----	-----
Mathematics.....	13	38 : 13	43 : 35	57 : 48	9 : 48
Music.....	7	28 : 58	36 : 45	40 : 43	5 : 53
Physical Education and Health	13	39 : 23	41 : 35	46 : 38	3 : 38
Science.....	10	43 : 05	47 : 35	54 : 25	5 : 40
Social Studies.....	14	39 : 35	46 : 25	51 : 15	5 : 50
Vocational.....	29	35 : 23	39 : 45	47 : 08	5 : 53
Basic Course.....	1	-----	-----	-----	-----
Total single-subject instructors..	138	37 : 51	43 : 00	50 : 35	6 : 22
Total multi-subject instructors..	166	39 : 56	45 : 10	51 : 35	5 : 50
IN HIGH SCHOOL DISTRICTS WITH 1,001 A.D.A. OR MORE					
Instructors in single-subject fields:					
Art.....	16	39 : 20	41 : 40	49 : 30	5 : 10
Commercial.....	22	39 : 45	45 : 20	51 : 45	6 : 00
Language Arts.....	74	39 : 58	46 : 15	50 : 45	5 : 24
Foreign Languages.....	17	38 : 03	43 : 45	46 : 48	4 : 23
Mathematics.....	37	38 : 33	42 : 05	46 : 49	4 : 08
Music.....	16	35 : 55	42 : 45	45 : 10	4 : 38
Physical Education and Health	56	37 : 40	42 : 15	50 : 00	6 : 10
Science.....	38	39 : 08	43 : 30	51 : 05	5 : 59
Social Studies.....	53	41 : 33	45 : 45	49 : 38	4 : 03
Vocational.....	71	35 : 08	48 : 35	43 : 36	4 : 14
Basic Course.....	3	-----	-----	-----	-----
Total single-subject instructors..	403	38 : 08	42 : 49	48 : 31	5 : 12
Total multi-subject instructors..	123	39 : 14	43 : 53	49 : 11	4 : 59

II. ASSIGNED WORK AT SCHEDULED HOURS

Table 5 summarizes data on the amount of time spent per week at regularly scheduled hours by full-time high school instructors in performing assigned tasks, whether instructional or noninstructional in nature. The median for the 12,758 instructors covered in this study was 27 hours and 29 minutes per week, indicating that in general about 63 per cent of the instructors' work week was spent on assigned work at definite hours during the school day.

The difference in amounts of time assigned to men and to women was negligible.

The number of hours spent on assigned work varied very little in relation to the type of school in which the work was done. Data not included here showed that there was, however, some variation according to size of district, especially in the senior and four-year high schools where instructors in small districts averaged one hour per week more than in medium-size districts, and two hours a week more than in large districts.

TABLE 5

MEDIAN NUMBER OF HOURS PER WEEK OF WORK ASSIGNED TO FULL-TIME HIGH SCHOOL INSTRUCTORS, BY TYPE OF SCHOOL AND SEX OF INSTRUCTORS, WITH Q_1 , Q_3 , AND Q OF DISTRIBUTION

Type of high schools	Number of instructors	Q_1	Median	Q_3	Q
		Hrs.Mins.	Hrs.Mins.	Hrs. Mins.	Hrs.Mins.
Total for all junior high schools	Male..... 1,470	25 : 09	27 : 02	28 : 24	1 : 38
	Female.... 2,016	25 : 47	27 : 07	28 : 23	1 : 18
	Total..... 3,486	25 : 29	27 : 05	28 : 23	1 : 27
Total for all senior and four-year high schools	Male..... 4,493	26 : 22	27 : 39	29 : 16	1 : 27
	Female.... 3,892	26 : 17	27 : 38	29 : 13	1 : 28
	Total..... 8,385	26 : 19	27 : 38	29 : 14	1 : 28
Total for all junior-senior high schools	Male..... 454	26 : 11	27 : 37	29 : 13	1 : 31
	Female.... 433	26 : 13	27 : 36	29 : 11	1 : 29
	Total..... 887	26 : 12	27 : 37	29 : 12	1 : 30
Total for all high schools	Male..... 6,417	26 : 04	27 : 31	29 : 04	1 : 30
	Female.... 6,341	26 : 07	27 : 28	28 : 57	1 : 25
	Total.....12,758	26 : 05	27 : 29	29 : 00	1 : 28

The total of assigned hours per instructor was rather constant regardless of the number of periods spent in teaching classes. Instructors who spent only a portion of their day in the classroom had proportionately greater responsibilities in noninstructional assignments.

Instructional Time

The median number of hours per week spent in classroom instruction by the 12,758 full-time instructors in high schools was 22 hours and 20 minutes. Information on this subject was tabulated according to the types of schools in which the instruction was given, and the results are shown in Table 6. Tabulations were also prepared according to the size of the school districts which maintained the three types of schools and according to the number of subjects taught, but the variations between the medians thus obtained were too slight to justify including the details here.

TABLE 6
NUMBER OF HOURS PER WEEK SPENT IN CLASSROOM INSTRUCTION BY
FULL-TIME HIGH SCHOOL INSTRUCTORS, BY TYPE OF SCHOOL, WITH Q₁,
Q₃, AND Q OF DISTRIBUTION

Type of high schools	Number of instructors	Q ₁	Median	Q ₃	Q
		Hrs.Mins.	Hrs.Mins.	Hrs. Mins.	Hrs.Mins.
Junior high schools	3,486	19 : 45	21 : 07	22 : 59	1 : 37
Senior and four- year high schools	8,385	19 : 37	22 : 47	24 : 07	2 : 15
Junior-senior high schools	887	19 : 48	22 : 56	24 : 20	2 : 16
Total for all high schools	12,758	19 : 40	22 : 20	23 : 49	2 : 05

The following variations which were noted may have significance. In junior high schools in small districts the amount of time spent in classroom instruction by single-subject instructors ranged from 20 hours and 5 minutes in foreign languages (31 instructors) to 22 hours and 51 minutes in vocational classes (444 instructors), the median being 21 hours and 11 minutes.

In senior and four-year high schools, typical single-subject instructors in small districts taught classes for amounts of time ranging from 20 hours and 15 minutes in physical education (19 instructors) to 26 hours and 15 minutes in commercial subjects (46 instructors), with a median

of 23 hours and 41 minutes for the group. In medium-size districts the typical schedule ranged from 20 hours and 56 minutes in social studies (124 instructors) to 25 hours and 2 minutes in music (73 instructors), the median being 22 hours and 58 minutes. In large districts the instructors in single-subject fields taught for amounts of time ranging from 20 hours and 57 minutes in social studies (548 instructors) to 22 hours and 58 minutes in vocational classes (776 instructors), with a median week of 22 hours and 33 minutes.

In junior-senior high schools in large districts, the typical work week in classroom instruction ranged from 20 hours and 59 minutes in foreign languages (17 instructors) to 22 hours and 59 minutes in vocational subjects (17 instructors), with a median of 22 hours and 54 minutes.

Scheduled Noninstructional Assignments

A total of 11,112 (87 per cent) of the 12,758 instructors included in this study reported that in addition to their classroom instruction assignments they had various other responsibilities at scheduled hours during the school day. Many instructors reported more than one such assigned task in a typical school week. The most frequently mentioned assignment in addition to classroom instruction was a preparation period; the next most frequent assignment was the conducting of home-room periods. Other noninstructional tasks at scheduled hours were counseling, library work, supervision of study hall or student activities, and curricular or administrative duties.

Among the full-time junior high school instructors included in this study, 92.6 per cent reported that they had such noninstructional assignments. In small districts the median amount of time spent in a typical week on these assignments was 5 hours and 8 minutes for 17 single-subject instructors, and 6 hours and 45 minutes for 24 multi-subject instructors; in medium-size districts, the median was 6 hours and 40 minutes for 20 single-subject instructors, and 4 hours and 55 minutes per week for 1,959 multi-subject instructors; in large districts, where the median for 4,021 single-subject instructors was 5 hours and 27 minutes, the instructors who taught foreign languages, language arts, or social studies spent more time in scheduled noninstructional assignments than those in other single-subject fields; the median for 1,206 multi-subject instructors in large districts was 5 hours and 28 minutes per week.

Among the full-time instructors in senior and four-year high schools, 84.6 per cent reported that they spent part of each week in assignments other than classroom teaching. In the small districts the median number of hours of noninstructional assignments was 6 hours and 11 minutes for 222 single-subject instructors, 5 hours and 52 minutes for 414 multi-subject instructors. In medium-size districts the median of 4 hours and 55 minutes for 1,037 single-subject instructors was 15 minutes longer than that for 532 multi-subject instructors. In the large districts, 4,021

single-subject instructors spent 5 hours and 7 minutes per week in non-instructional assignments, the largest median number of hours for single subject fields being reported by teachers of social studies and of mathematics; the median for 871 multi-subject instructors was 4 minutes shorter.

In junior-senior high schools, 84.7 per cent of the full-time instructors reported that they performed assigned work of noninstructional nature. In the small districts, 19 single-subject instructors spent 4 hours and 19 minutes in such work in a typical week, while 28 multi-subject instructors spent 7 hours and 15 minutes. In medium-size districts the medians were 4 hours and 48 minutes per week for 113 instructors in single-subject fields, and 4 hours and 17 minutes for 146 in multi-subject fields. In the large districts, 347 instructors in single fields spent 5 hours and 4 minutes in a typical week in noninstructional assignments; 98 multi-subject instructors spent 4 hours and 36 minutes per week.

IV. NONINSTRUCTIONAL DUTIES OUT OF SCHOOL HOURS

In addition to classroom instruction and other duties assigned at regular hours, instructors in California high schools also spent part of their work week in performing various duties outside the regular school day. These noninstructional duties, largely unassigned, included the following types of tasks: (1) planning and preparing the day's work; (2) correcting, classifying, and grading students' work, including tests; (3) clerical work on records and reports; (4) conferences with principals, supervisors, counselors, student teachers; (5) conferences with pupils and parents outside the regular school day; (6) in-service education, such as workshops, faculty meetings, school committees; (7) extracurricular activities, such as supervising student clubs and programs; (8) supervisory duties in yard, hallway, cafeteria; and (9) school-community services, such as co-operation with parent-teacher associations. The first two types of work were most frequently mentioned, namely, planning and preparation and correcting student work.

The median amounts of time per week spent outside of school hours in these noninstructional duties are shown in Table 7, by type of high school, size of district, and number of subjects taught. In the large districts, typical amounts of time reported by instructors in the various single-subject fields ranged from 12 hours and 8 minutes per week in vocational subjects (444 instructors) to 16 hours and 46 minutes per week in language arts (254 instructors); in senior and four-year high schools, the range extended from 13 hours and 15 minutes per week in music (173 instructors) to 19 hours and 2 minutes in language arts (782 instructors); the medians for instructors in junior-senior high schools in the large districts ranged from 11 hours and 8 minutes in vocational subjects (71 instructors) to 18 hours and 5 minutes in language arts (73 instructors).

TABLE 7

MEDIAN NUMBER OF HOURS PER WEEK SPENT BY FULL TIME HIGH SCHOOL INSTRUCTORS IN SCHOOL WORK OUTSIDE OF SCHOOL HOURS, BY TYPE OF SCHOOL AND SIZE OF DISTRICT

Type of school and size of district	Instructors in single subject fields		Instructors in more than one subject field	
	Number of instructors	Hrs.Mins.	Number of instructors	Hrs.Mins.
Junior high schools				
in small districts.....	19	12 : 48	24	16 : 20
in medium-size districts.....	21	12 : 25	39	16 : 12
in large districts.....	2,131	14 : 25	1,252	16 : 09
Senior and four-year high schools				
in small districts.....	283	16 : 09	513	16 : 31
in medium-size districts.....	1,310	15 : 10	664	15 : 50
in large districts.....	4,586	16 : 18	1,015	17 : 24
Junior-senior high schools				
in small districts.....	22	16 : 25	35	22 : 15
in medium-size districts.....	138	15 : 20	166	17 : 50
in large districts.....	402	15 : 20	122	16 : 20

Planning and Preparation

The most frequently mentioned kind of school work performed by full-time high school instructors out of school hours was planning and preparation for the assigned work to be done during regular school hours. Table 8 shows the median amounts of time spent in this way by all instructors at each high school level and also by single-subject instructors in the large school districts.

In junior high schools the median amount of time spent in such work in a typical school week by 3,466 instructors was 4 hours and 6 minutes. In senior and four-year high schools the median for 8,362 instructors was 5 hours and 1 minute. The difference between men and women instructors in these schools in regard to total weekly planning time reported was negligible, the median for women being 24 minutes longer per week. The median weekly planning and preparation by 884 instructors in junior-senior high schools required 5 hours and 1 minute, which is the same as that for senior and four-year high schools.

Other Noninstructional Duties

In most instances instructors in foreign language, language arts, and mathematics spent more time per week in correcting, classifying, and grading students' work, including tests, than instructors in other subject

fields. Time spent in clerical duties such as making records and writing reports was fairly constant among the various subject fields, as was also the time spent in conferences with staff members and in conferences with students and their parents. Instructors spent less than an hour a week in each of these duties, on the average. In a typical work week, instructors spent about 1 hour per week in in-service training activities regardless of the subject fields in which they taught. The median amounts of time spent in extracurricular duties by physical education and health instructors were higher than for instructors in other departments. This was especially true in the senior and four-year high schools. Physical education and health instructors also spent more time per week in schoolyard and hallway supervision than instructors in other fields.

TABLE 8

MEDIAN AMOUNTS OF TIME PER WEEK SPENT IN PLANNING AND PREPARATION OUTSIDE OF SCHOOL HOURS BY ALL HIGH SCHOOL INSTRUCTORS IN ALL DISTRICTS, AND BY THOSE INSTRUCTORS IN LARGE SCHOOL DISTRICTS WHO TAUGHT ONLY IN ONE OF ELEVEN SUBJECT FIELDS

Subject field	Type of school					
	Junior high school		Senior and four-year high school		Junior-senior high school	
	No. of instructors	Hrs.Mins.	No. of instructors	Hrs.Mins.	No. of instructors	Hrs.Mins.
Art.....	124	4 : 50	193	5 : 04	16	5 : 06
Commercial.....	52	2 : 34	440	4 : 04	22	5 : 04
Language Arts.....	254	4 : 04	782	5 : 01	74	3 : 49
Foreign Language.....	31	2 : 38	254	5 : 00	17	3 : 49
Mathematics.....	337	3 : 28	338	3 : 25	37	3 : 45
Music.....	138	4 : 01	173	3 : 27	16	3 : 15
Physical Education and Health.....	335	2 : 39	653	3 : 24	56	3 : 02
Science.....	163	4 : 13	386	5 : 03	38	5 : 02
Social Studies.....	192	4 : 17	548	5 : 05	53	5 : 03
Vocational.....	444	3 : 44	776	4 : 32	71	5 : 03
Basic Course.....	61	4 : 05	52	5 : 02	---	---
Median in all districts for all instructors, including those who taught in more than one subject field	3,466	4 : 06	8,362	5 : 01	884	5 : 01

Music instructors spent more time per week in school-community affairs than instructors in other departments, the median for music instructors being slightly more than one hour weekly.

V. CLASS SIZE

The number of classes of students, that is, the different classroom groups in any subject, being taught in April, 1950, by the 12,758 full-time high school instructors included in this study was 68,731. Of this number, 18,910 classes were in junior high schools, 44,610 in senior and four-year high schools, and 5,111 in junior-senior high schools.

In each of these three types of schools, classes in vocational subjects had the smallest median enrollment, while classes in physical education and health had the largest median enrollment. In junior high schools the range between these was from 22.9 to 42.8 students, with a median of 31.6; in senior and four-year high schools, the range was from 19.7 to 35.7, the median enrollment being 25.7 students per class; in junior-senior high schools, enrollment ranged from 20.3 students to 37.6, with a median of 28 students.

Class Size by Size of High School District

In junior high schools, the median class size in large districts was approximately 6 students larger than the median in small districts. The same sort of variation was observed in senior and four-year high schools, where the median class in large districts enrolled 27.5 students, almost 11 students more than in the median class of 16.8 students in small districts. In junior-senior high schools, the median size of classes ranged from 20.2 students in small districts to 30.6 in large districts.

VI. DAILY STUDENT CONTACTS IN CLASSROOMS

The instructors included in this study reported the number of students enrolled in each class they taught, and also the number of students whom they met, if any, during the performance of other scheduled assignments. The methods of counting student contacts, other than in regularly assigned class periods, varied so widely and involved such differing degrees of responsibility that the figures here quoted are limited to classroom contacts only.

In junior high schools in small districts, single-subject instructors had a median number of 124 student contacts per day, and multi-subject instructors 133 per day. In medium-size districts, instructors in single-subject fields had a median of 147.5 student contacts per day, and multi-subject instructors 185 per day. In large districts, the corresponding medians were 151.1 and 159.4.

In senior and four-year high schools in small districts, instructors who taught in single-subject fields had a median number of 90.5 student contacts daily, while those teaching in more than one subject field had 98.7 such contacts. In medium-size districts the median number of daily

student contacts for instructors in single-subject fields was 118.5, for instructors in more than one subject field, 128.9. The corresponding medians in large districts were 130.7 and 129.1 student contacts daily.

In junior-senior high schools in small districts, the median daily student contacts for instructors in single-subject fields numbered 83, for instructors in more than one field, 132.7. In medium-size districts the medians for these two groups of instructors were 116.3 and 136.8 student contacts daily, respectively; in large school districts the medians were 147 and 150.8.

From these data it may be concluded that, except in the larger schools in the large districts, full-time instructors who taught in more than one subject field met from 4 to 50 more students daily in their classrooms than the instructors who taught in one subject field only.

VII. THE SCHOOL DAY

Length of School Day in Minutes

There was no appreciable difference in the length of school day in the three types of high schools. More than 68 per cent of the 288 school districts involved in this study maintained school between 330 and 369 minutes per day. The school day in small districts was slightly longer than in the large districts, on the average.

Number of Class Periods in School Day

The high schools in a majority (62 per cent) of the small school districts maintained a school day with seven class periods. In medium-size districts 51 per cent maintained a six-period schedule, 44 per cent a seven-period schedule. Schools in the large districts predominantly (69 per cent) favored a six-period day. In summary, it may be said that the high schools in small districts maintained a seven-period day and those in large districts maintained a six-period day.

Length of Periods in School Day

The median length of class period in junior high schools and junior-senior high schools was 50 minutes. This was also true for senior and four-year high schools in small districts. In senior and four-year high schools in medium-size and large districts, the median length of class period was 55 minutes.

Periods for study hall, library, student activities, and teacher preparation were the same length as the regular class instruction periods, with the exception of home-room periods. The median length of home-room periods was 25 minutes.

VIII. SUMMARY OF FINDINGS

From the data presented in this report it can be noted that a majority of teachers in California high schools worked 40 hours or more a week,

the median being 43 hours and 33 minutes. Approximately one-fourth of these teachers worked less than 39 hours a week and one-fourth worked more than 49.

The typical senior high school teacher worked about 2 hours a week more than the typical junior high school teacher. He also worked about a half-hour more per week than the typical junior-senior high school teacher. Most of the two-hour difference between the typical work week for junior high school teachers and for senior and four-year high school teachers was due to the fact that the latter spent more time in preparation for classroom teaching and in performance of noninstructional duties outside of school hours.

The amount of assigned work at scheduled hours, whether instructional or noninstructional in character, varied little with the type of school organization. Approximately 63 per cent of the teachers' work week was spent on assignments carried out at definite hours during the school day.

It may be noted that in the larger school districts more of the teaching in high schools was departmentalized, that is, more of the teachers were assigned to teach one subject only. In school districts having average daily attendance of 300 or less, there were about twice as many instructors teaching in more than one subject field than there were single-subject instructors. In the larger districts, where the average daily attendance was more than 1,000, this condition was reversed and the single-subject instructors outnumbered the others three to one.

Instructors who taught language arts or social studies spent more time in planning and preparation after school hours than did instructors in other subject fields. Language arts instructors also spent more time in correcting and grading student work than instructors in other subject fields.

The number of daily contacts with students per teacher was highest at the junior high school level and lowest at the senior high school level.

The median class size was higher in junior high schools than in senior high schools.

APPORTIONMENT OF THE STATE SCHOOL FUND

RALPH R. BOYDEN, *Chief, Bureau of School Apportionments and Reports*

The State School Fund for the fiscal year 1953-54 amounted to a total of \$367,073,437.55. This consisted of \$366,690,420.00, representing \$180 for each of the 2,037,169 units of average daily attendance in the public school system in kindergarten and grades 1 through 14 during the fiscal year 1952-53, and the sum of \$383,017.55, representing the amount required to reimburse school districts for 75 per cent of the excess expense of the automobile driver training program during the fiscal year 1952-53. The State School Fund for 1953-54 was larger than that of 1952-53 by an amount of \$86,410,318.49. This was due largely to the constitutional amendment approved at the general election in November, 1952.

The pattern of apportionment has been changed from time to time so that there are now five apportionments during the fiscal year instead of a single annual apportionment. These five apportionments for the fiscal year 1953-54 were made on the dates and in the amounts as indicated below:

	Date	Amount
Principal Apportionment, consisting of basic state aid, state equalization aid, and allowances to county school service funds	November 10, 1953	\$327,923,381.55
Special Purpose Apportionment, for excess expense of education of handicapped, for transportation of pupils, for automobile driver training	December 10, 1953	14,105,204.05
First Period Apportionment for Growth	February 15, 1954	9,552,402.41
Second Period Apportionment for Growth	June 24, 1954	14,893,625.59
Final Apportionment	June 25, 1954	598,823.95
Total State School Fund for the fiscal year 1953-54		<u>\$367,073,437.55</u>

Data concerning the Principal Apportionment and Special Purpose Apportionment were published in detail.¹ A summary of this information was published in *California Schools*.²

The legislature has recognized for several years that State aid to school districts based upon the average daily attendance in the district

¹ *Apportionment of the State School Fund for the fiscal year ending June 30, 1954: Part I—Principal Apportionment; Part II—Special Purpose Apportionment.* Sacramento: California State Department of Education, December, 1953.

² Ralph R. Boyden, "Apportionment of the State School Fund," *California Schools*, XXV (March, 1954), 105-9.

during the preceding fiscal year is inadequate for support of an educational program in the rapidly growing school districts so characteristic of present day California. The present law provides for apportionment for any growth in attendance in the regular day schools of the district over the attendance of the preceding fiscal year; thus, school districts are better able to meet the increased cost of education on a more current basis. The total amount allowed for growth during the fiscal year 1953-54 was \$24,446,028.00.

The First Period Apportionment for Growth was certified to the State Controller on February 15, 1954, in the amount of \$9,552,402.41. The Second Period Apportionment for Growth was certified to the State Controller on June 24, 1954, in the amount of \$14,893,625.59.

The 1953 apportionment law established new patterns for apportionment for growth in respect to small elementary and small high school districts. Minor amounts of growth in small elementary school districts maintaining only one school are no longer necessarily considered as justification for a monetary allowance; growth is compensated for in such cases only as it necessitates material increases in expenditure at the local level. These new patterns have considerably reduced the number of elementary districts to which apportionments for growth have been allowed. At the high school and junior college levels a greater number of districts were allowed apportionments for growth than last year. This supports other evidence that the growth problem is increasing at the secondary school levels. Although the total number of school districts to which growth apportionments have been allowed has been reduced from last year, the unit rate for such apportionments, based generally on the annual unit rate of the principal apportionment, has increased, reflecting the increase in state support approved at the 1952 general election. A comparison of Apportionments for Growth made this fiscal year with those made a year previously, by level, is shown in the following tabulation:

FIRST PERIOD

	<i>Number of districts</i>	<i>Growth in average attendance</i>	<i>Amount apportioned</i>
FISCAL YEAR 1953-54			
Elementary	788	131,438	\$7,421,163.66
High school	279	35,355	1,803,404.96
Junior college	39	7,331	327,833.79
Total	1106	174,124	\$9,552,402.41
FISCAL YEAR 1952-53			
Elementary	1092	111,395	\$5,247,742.14
High school	264	26,278	1,164,320.47
Junior college	44	6,029	250,625.96
Total	1400	143,702	\$6,662,688.57

SECOND PERIOD

	Number of districts	Growth in average attendance	Amount apportioned
FISCAL YEAR 1953-54			
Elementary	800	129,448	\$11,304,142.36
High school	272	36,378	2,807,267.51
Junior college	49	10,963	782,215.72
Total	1121	176,789	\$14,893,625.59
FISCAL YEAR 1952-53			
Elementary	1084	116,166	\$9,923,623.77
High school	262	24,300	1,972,955.13
Junior college	36	4,102	307,729.88
Total	1382	144,568	\$12,204,308.78

The Final Apportionment results from prorating the balance, if any, remaining in the State School Fund after all other apportionments are made among the elementary and unified school districts which received state equalization aid for the elementary level in the Principal Apportionment. The Final Apportionment was certified to the State Controller June 25, 1954, in the amount of \$598,823.95. It was apportioned at the rate of \$0.44079952 per unit of average daily attendance credited to such districts in kindergarten and grades 1 through 8 for the preceding fiscal year. This procedure, directed in the 1953 apportionment law, is designed to meet the Constitutional requirement for complete apportionment of the State School Fund during each fiscal year.

Full details regarding the two apportionments for growth, the final apportionment, the total amount apportioned to each school district, and other pertinent information relating to apportionments are now being published.¹

¹ *Apportionments for Growth and Final Apportionment from the California State School Fund for the Fiscal Year Ending June 30, 1954: Part III—First Period Apportionment for Growth; Part IV—Second Period Apportionment for Growth; Part V—Final Apportionment.* Sacramento: California State Department of Education, August, 1954.

INTERPRETATIONS OF LAW

APPLICABLE TO SCHOOLS

LAURENCE D. KEARNEY, *Administrative Adviser*

[The following items are merely digests, and although care is taken to state accurately the purport of the opinions reported, the items have the limitations common to all digests. The reader is therefore urged to examine the complete text of an opinion digested and, when necessary, secure competent legal advice before taking any action based thereon.]

OPINIONS OF THE CALIFORNIA SUPREME COURT

Compensation of Architect Upon Abandonment by School District of a Construction Project

A school district which abandoned a construction project after working (as distinguished from preliminary) drawings had been prepared and accepted by the district was liable to the architect for payment of a proportionate amount of the total construction cost under a contract which specified (1) that the district would pay him an amount equal to 8 per cent of the construction cost "when services hereinafter stipulated have been rendered," (2) that designated payments on account should be paid following certain events, including "upon completing of the working drawings and their acceptance by the District," (3) that if the work should terminate after preparation of preliminary drawings a fixed sum "shall constitute complete reimbursement," and (4) that upon abandonment of the project the school district would increase the total amount paid to the architect to an amount "which shall bear the same proportion to the fee as the amount of services performed . . . by the architect prior to abandonment . . . shall bear to the entire services the architect is required to perform." The agreement did not provide that actual execution of a construction contract was a condition precedent to liability to pay the proportionately accruing percentage of the fee. Evidence of the total construction cost was introduced. (*Kingsbury v. Arcadia Unified School District*, 43 A.C. 33.)

OPINIONS OF THE CALIFORNIA DISTRICT COURTS OF APPEAL

Consent of Governing Board of Elementary District to Annexation of the District to a Union District Not Required

Proceedings for annexation of an elementary school district to a union elementary school district under Education Code Sections 2891 through 2895 were valid, and the annexation was complete, where a proper peti-

tion signed by the required number of qualified registered electors residing in the elementary district together with an instrument expressing the consent of the governing board of the union school district were presented to the county superintendent of schools, an election was held thereon, and a majority of the votes cast were in favor of annexation. Adoption by the governing board of the elementary school district of a resolution declaring itself opposed to the annexation and failure of that board to execute an agreement with the governing board of the union school district setting forth "such terms as may be agreed upon" did not invalidate the annexation proceedings. No consent to annexation was required of the governing board of the district to be annexed. Its only function was this: If a majority of the trustees of the union school district consented to annexation and if a majority of the electors at the election voted for annexation, a duty was immediately cast upon the governing board of the elementary school district to accept the decision made by those required to make it that annexation should occur and to proceed to agree with the board of trustees of the union district upon such terms of annexation as those two bodies under the law might have authority to agree upon. (*The Merrill Elementary School District of Tehama County v. Joseph C. Rapose*, 125 A.C.A. 969.)

FOR YOUR INFORMATION

CONFERENCE ON THE LANGUAGE ARTS

A state-wide conference on curriculum and instructional problems in the teaching of the language arts will be held September 24-26, 1954, at Asilomar, Pacific Grove. The conference will be conducted by the California Association of Teachers of English, Central Section, in co-operation with the State Department of Education, the California Association of School Administrators, the California School Supervisors Association, the California Association of Secondary School Administrators, the California Elementary School Administrators Association, and the Bay Area Curriculum Council.

Topics for consideration will include the teaching of reading at all levels; the teaching of writing; unified courses in English and social studies; preparation for college English; the teaching of listening; applying the results of research to the instructional program; the in-service training of language arts teachers; and group processes in the English classroom.

The fee of \$17.50 covers registration, lodging Friday and Saturday nights, and all meals except dinner on Saturday night. Requests for reservations should be addressed to Miss Eleanor Crouch, 64 Panetta Road, Carmel Valley, California.¹

"HELP WANTED, URGENT!"

A radio program on the shortage of teachers and classrooms in California was presented over radio KCBS, San Francisco, on June 10, 1954, from 9:00 to 9:30 p.m.

Statements emphasizing the need for additional teachers and more classroom space were made by a number of individuals—pupils, parents, teachers, supervisors, and superintendents—in school systems in the San Francisco Bay area. The program was planned by James C. Stone, Specialist in Teacher Education, and Frances W. Noel, Chief, Bureau of Audio-Visual Education, of the State Department of Education, with the co-operation of Pedee Worth, manager of KCBS, and Morris Hamilton, script writer. The results of overcrowding and double sessions and the special problems of emergency teachers were presented in a simple, factual, and unrehearsed manner. Roy E. Simpson, Superintendent of Public Instruction, and Dr. Stone, representing the State Department of

¹ An incorrect address for Miss Crouch was given in the mimeographed announcement mailed by the State Department of Education to school administrators. Reservations sent by error to Paso Robles will be forwarded to Carmel Valley and need not be confirmed or duplicated.

Education, and Arthur F. Corey, representing the California Teachers Association, took part in the discussion.

Recordings of the program will be available in early fall for release by local radio stations throughout the state. Requests for information about this and subsequent programs in the series may be addressed to the Bureau of Audio-Visual Education, State Department of Education, Sacramento 14, California.

CHILDREN AND TV

The Association for Childhood Education International has recently published a 40-page bulletin entitled *Children and TV—Making the Most of It*, in response to requests of parents and teachers for immediate help on problems related to television. Outstanding educators familiar with children as well as with television have combined to present a positive and constructive approach to television and family living. Among the topics covered are the research that has been done in connection with children and television, the effect of television advertising, and the teacher's role in utilizing experiences with television, both in and out of school. A variety of anecdotes of family solutions to the problems of television in the home reinforces the points made throughout the bulletin.

Children and TV—Making the Most of It is sent to members of the Association for Childhood Education as a part of their regular service. It is also available to nonmembers at the price of \$0.75, with discount of 20 per cent on lots of 25 or more. Orders are to be sent to the Association for Childhood Education International, 1200 Fifteenth St., N.W., Washington 5, D.C.

WORK CONFERENCE ON CONSERVATION EDUCATION

The Conservation Education Association will hold its 1953 work conference on the campus of the University of Wyoming, at Laramie, August 21 to 25. The conference topic will be "Teacher Education in Conservation."

Three teacher-education institutions have been selected for an intensive study of their curriculums: San Francisco State College, San Francisco, California; Wisconsin State Teachers College, Stevens Point, Wisconsin; and Plymouth Teachers College, Plymouth, New Hampshire. These colleges were selected largely because of the nature of their organization and their geographic location. The strong and weak points of their programs on conservation education will be analyzed and judged.

The specific objectives of the Association are to develop an understanding of man's relation to the environment, including all natural resources; to promote acceptance of man's responsibility for co-operat-

ing with nature to preserve a favorable environment for himself; to show the responsibility of each citizen to use and manage natural resources to the best long-term interest of all the people in our nation; to suggest ways in which each citizen can discharge that responsibility; and to show the necessity for immediate action.

The Conservation Education Association began in April, 1954, the issuance of a quarterly newsletter for its membership. The Publications Committee is preparing a bibliography on conservation. Reports of conservation workshops held in 1952-53 and in 1954 are being prepared jointly by this Association, the U. S. Forest Service, U. S. Soil Conservation Service, and the National Association of Biology Teachers.

Anyone interested in the advancement of conservation education is urged to attend and participate in the discussions at the Laramie meeting. A detailed program will be announced later. For room reservations on the University Campus, contact Dr. John W. Scott, 1409 Garfield Street, Laramie, Wyoming.

PROFESSIONAL LITERATURE

PUBLICATIONS RECEIVED

- ARTER, RHETTA M. *Living in Chelsea*. Commentary by Dan W. Dodson. A Study Sponsored by the Hudson Guild, conducted and reported by the Center for Human Relations Studies, School of Education, New York University. Human Relations Monograph 4. New York 11: The Center for Human Relations Studies, School of Education, New York University (157 West 13th St.), 1954. Pp. vi + 44. \$0.50.
- Audio-Visual Materials for Teaching Reading*. Compiled by Robert Leestma, Consultant, Audio-Visual Education Center, University of Michigan. Ann Arbor, Mich.: Slater's Book Store, Inc. (336 S. State St.), 1954. Pp. x + 108. \$1.50.*
- BIRDSALL, BERGEN. *Teaching Unit on Alcohol Education*. Complete Lesson Plans for the High School Teacher. Los Angeles 13: California Temperance Federation (427 West Fifth St.), H. H. Donnenworth, Executive Secretary, 1953. Pp. 39 (mimeographed).
- BRYSON, LYMAN. *Reason and Discontent: The Task of Liberal Adult Education*. The Bryson Lectures. Pasadena, California: The Fund for Adult Education, May, 1954. Pp. 48.
- Civil Defense*. A Curriculum Resource Unit for New York City Schools. Curriculum Bulletin 1953-54 Series, Number 4. Brooklyn 1, N. Y.: Board of Education of the City of New York (110 Livingston St.), 1954. Pp. vi + 70.
- The Curriculum: Organization and Development*. Review of Educational Research, Vol. XXIV, June, 1954. Washington 6: American Educational Research Association, a Department of the National Education Association of the United States, 1954. Pp. 191-262. \$1.50.
- EDUCATIONAL POLICIES COMMISSION. *Strengthening Community Life: Schools Can Help*. Washington 6: Educational Policies Commission of the National Education Association of the United States and the American Association of School Administrators (1201 Sixteenth St., N.W.), 1954. Pp. vi + 42. \$0.35.
- FLAUM, LAURENCE S. *The Activity High School: The Principles of Its Operation*. New York 16: Harper and Brothers, 1953. Pp. xii + 418.
- HOLLINSHEAD, BYRON S., and RODGERS, ROBERT R. *Who Should Go to College?* With a chapter on the Role of Motivation in Attendance at Post-High-school Educational Institutions. Published for the Commission on Financing Higher Education. New York 27: Columbia University Press (2960 Broadway), 1952. Pp. xvi + 190.
- Governor's Conference on California's Children and Youth: 1954*. Held at Sacramento, California, February 25 and 26, 1954. Sacramento 14: Goodwin J. Knight, Governor of California, 1954. Pp. 126.
- If We Fail the Schools . . .* Economic Outlook, Vol. XV, No. 3, March, 1954. Washington 6: Department of Education and Research, Congress of Industrial Organizations (718 Jackson Place, N.W.), 1954. Pp. 17-24. \$0.15.
- MASSIMINE, E. VIRGINIA. *Challenges of a Changing Population*. A Study of the Integration of the Puerto Ricans in a West Side Community in Manhattan. Foreword by H. Harry Giles. New York 11: The Center for Human Relations Studies, School of Education, New York University (157 West 13th St.), 1954. Pp. 36.
- MCMERNEY, CHESTER T. *The Curriculum*. McGraw-Hill Series in Education. New York 36: McGraw-Hill Book Co., Inc. (330 W. 42nd St.), 1953. Pp. xii + 292.

* Discounts on orders in quantity.

- MOUSTAKAS, CLARK E. *Children in Play Therapy: A Key to Understanding Normal and Disturbed Emotions*. New York 36: McGraw-Hill Book Co., Inc. (330 W. 42nd St.), 1953. Pp. x + 218.
- Needed Research in Teacher Education*. Report of the Joint Committee of the American Association of Colleges for Teacher Education and the American Educational Research Association. A.A.C.T.E. Study Series, Number 2. Oneonta, N. Y.: American Association of Colleges for Teacher Education (11 Elm St.), 1954. Pp. 62. \$1.00.
- Our Public Schools, Part IV—Summer Playground Activities*. Report of the Superintendent of Schools of the City of New York, 1952-53. Brooklyn 1, N. Y.: Board of Education of the City of New York (110 Livingston St.), 1953. Pp. vi + 30.
- RUSSELL, DAVID H. *The Dimensions of Children's Meaning Vocabularies in Grades Four Through Twelve*. University of California Publications in Education, Volume 11, No. 5. Berkeley and Los Angeles: University of California Press, 1954. Pp. 315-414. \$1.25.
- Segregation and the Schools*. Public Affairs Pamphlet No. 209. New York 16, N. Y.: Public Affairs Committee, Inc., June, 1954. Pp. 28. \$0.25.*
- Skills in Social Studies*. Twenty-fourth Yearbook of the National Council for the Social Studies. Helen McCracken Carpenter, editor. Washington 6: National Education Association, 1954. Pp. 282.
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- VAN DALEN, DEOBOLD B. *A World History of Physical Education, Cultural, Philosophical, Comparative*. Prentice-Hall Books on Health and Sports. New York: Prentice-Hall, Inc., 1953. Pp. x + 640.
- WATSON, JACK McLaurin. *The Education of School Music Teachers for Community Music Leadership*. Teachers College Contributions to Education, No. 948. New York 27: Bureau of Publications, Teachers College, Columbia University, 1948. Pp. x + 92.
- WITTICH, WALTER ARNO, and SCHULLER, CHARLES. *Audio-Visual Materials, Their Nature and Use*. Exploration Series in Education. New York 16: Harper and Brothers, 1953. Pp. xx + 564.
- A Year of Tangible Results*. A Review of the Work of the Specialized Agencies and Children's Fund During 1953. The United Nations at Work, No. 9. New York: Department of Public Information, United Nations, 1954. Reprinted from *United Nations Bulletin*, XVI (January 15, 1954). Pp. 20. \$0.15.

* Discounts on orders in quantity.

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